

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for measuring latency between a first device and a second device during a user data session, said first and second devices communicating in accordance with a communications specification, said method comprising:

transmitting, during a user data communication session between said first and second devices, a message from said second device to said first device, said message ~~provided by~~ being in accordance with said communications specification;

during the user data session receiving a response message from said first device, said response message ~~provided by~~ being in accordance with said communications specification;

computing an elapsed time from transmission of said message to receipt of said response message to determine said latency; and

recording said latency in a latency parameter in a data record.

2. (Original) A method in accordance with claim 1, wherein said message and said response message are control plane messages.

3. (Original) A method in accordance with claim 1, wherein said message and said response message do not affect a session data usage of a user of said first device.

4. (Original) A method in accordance with claim 1, further comprising:
transmitting said data record containing said latency parameter to an application server.

5. (Original) A method in accordance with claim 1, wherein said data record is provided by said communications specification, said method further comprising:

adding said latency parameter to said data record.

6. (Original) A method in accordance with claim 1, wherein said first device and said second device are adapted to communicate wirelessly using said communications specification.

7. (Original) A method in accordance with claim 1, wherein said first device and said second device are adapted to communicate via a wire-line portion of a wireless network using said communications specification.

8. (Original) A method in accordance with claim 1, wherein said first device is a mobile station and said second device is a mobility agent.

9. (Original) A method in accordance with claim 1, wherein said first device is a home agent and said second device is a mobility agent.

10. (Original) A method in accordance with claim 1, wherein said message and said response message are link establishment protocol messages.

11. (Original) A method in accordance with claim 1, wherein said step of transmitting is performed after said communication session has been established.

12. (Original) A method in accordance with claim 1, wherein said step of transmitting is performed upon the expiration of a timer.

13. (Original) A method in accordance with claim 12, wherein said timer is provided by said communications specification.

14. (Original) A method in accordance with claim 12, wherein said timer is not provided by said communications specification, said method further comprising:

implementing said timer in said second device, said timer configured to expire during said communication session.

15. (Cancelled).

16. (Currently Amended) A method, performed by a packet data serving node, for measuring latency during a user data session, comprising:

storing a first start time;

transmitting, to a mobile station during the user data session, a Link Control Protocol Echo message;

receiving a Link Control Protocol Echo Response message during the user data session from said mobile station;

storing a first stop time; and

computing a wireless access latency based on said first start time and said first stop time.

17. (Original) A method in accordance with claim 16, wherein said step of transmitting is performed during a communication session between said packet data serving node and said mobile station.

18. (Original) A method in accordance with claim 17, wherein said step of transmitting is performed upon expiration of a timer.

19. (Original) A method in accordance with claim 18, further comprising:

implementing said timer in said packet data serving node, said time configured to expire during said communication session.

20. (Original) A method in accordance with claim 16, wherein said packet data serving node and said mobile station are configured to communicate in accordance with a communications specification.

21. (Original) A method in accordance with claim 20, wherein said communications specification provides for a data record, said method further comprising:

adding a wireless access latency parameter to said data record; and

recording said wireless access latency in said wireless access latency parameter.

22. (Original) A method in accordance with claim 16, further comprising:
storing a second start time;

transmitting, to a home agent, a Mobile IP Registration Request message; receiving a Mobile IP Registration Reply message from said home agent; storing a second stop time; and

computing an internet access latency based on said second start time and said second stop time.

23. (Original) A method in accordance with claim 22, wherein said step of computing said internet access latency further comprises adjusting said internet access latency for a processing time associated with said home agent.

24. (Original) A method in accordance with claim 22, wherein said step of computing said internet access latency further comprises adjusting said internet access latency for an estimated processing time associated with said home agent.

25. (Original) A method in accordance with claim 22 wherein said packet data serving node and said home agent are configured to communicate in accordance with a communications specification, said communications specification providing for a data record, said method further comprising:

adding an internet access latency parameter to said data record; and recording said internet access latency in said internet access latency parameter.

26. (Currently Amended) A system for measuring latency during a user data session carried out in accordance with a communications specification comprising:

a first device; and

a second device adapted for communicating with said first device in accordance with said communications specification and for transmitting a message to said first device during the user

data session, receiving a response message from said first device during the user data session, computing an elapsed time from transmission of said message to receipt of said response message to determine said latency, and recording said latency in a latency parameter in a data record;

wherein said message and said response message are provided by said communications specification.

27. (Cancelled).

28. (Cancelled).

29. (Original) A system in accordance with claim 26, wherein said message and said response message are control plane messages.

30. (Original) A system in accordance with claim 26, wherein said message and said response message do not affect a session data usage of a user of said first device.

31. (Original) A system in accordance with claim 26, further comprising:

an application server connected to said second device, said second device further adapted for transmitting said data record containing said latency parameter to said application server.

32. (Original) A system in accordance with claim 26, wherein said data record is provided by said communications specification, said second device further adapted for adding said latency parameter to said data record.

33. (Original) A system in accordance with claim 26, wherein said first device and said second device are adapted to communicate wirelessly using said communications specification.

34. (Original) A system in accordance with claim 26, wherein said first device and said second device are adapted to communicate via a wire-line portion of a wireless network using said communications specification.

35. (Original) A system in accordance with claim 26, wherein said first device is a mobile station and said second device is a mobility agent.

36. (Original) A system in accordance with claim 26, wherein said first device is a home agent and said second device is a mobility agent.

37. (Original) A system in accordance with claim 26, wherein said message and said response message are link establishment protocol messages.

38. (Original) A system in accordance with claim 26, wherein said second device is adapted to transmit said message upon the expiration of a timer.

39. (Original) A system in accordance with claim 38, wherein said timer is provided by said communications specification.

40. (Currently Amended) A system for measuring wireless access latency during a user data session, the system comprising:

a mobile station; and

a packet data serving node for wirelessly communicating with said mobile station, said packet data serving node adapted for transmitting a link control protocol echo message to said mobile station during the user data session, receiving a link control protocol response message from said mobile station during the user data session, and computing an elapsed time from transmission of said link control protocol echo message to receipt of said link control protocol response message to determine said wireless access latency.

41. (Cancelled).

42. (Original) A system in accordance with claim 40, wherein said packet data serving node is adapted for transmitting said message to said first device upon expiration of a timer.

43. (Original) A system in accordance with claim 40, wherein said link control protocol echo message and said link control protocol echo response message are provided by a communications specification.

44. (Original) A system in accordance with claim 43, wherein said communications specification provides for a data record, said packet data serving node further adapted for adding a wireless access latency parameter to said data record and recording said wireless access latency in said wireless access latency parameter.

45. (Currently Amended) A system for measuring internet access latency comprising:
a home agent; and

a packet data serving node for communicating with said home agent, said packet data serving node adapted for transmitting a mobile internet protocol registration request message to said home agent during a user data session, receiving a mobile internet protocol registration reply message from said home agent during the user data session, and computing an elapsed time from transmission of said mobile internet protocol registration request message to receipt of said mobile internet protocol registration reply message to determine said internet access latency.

46. (Original) A system in accordance with claim 45, wherein said packet data serving node is further adapted for adjusting said internet access latency for a processing time associated with said home agent.

47. (Original) A system in accordance with claim 45, wherein said packet data serving node is further adapted for adjusting said internet access latency for an estimated processing time associated with said home agent.

48. (Original) A system in accordance with claim 45, wherein said mobile internet protocol registration request message and said mobile internet protocol registration reply message are provided by a communications specification.

49. (Original) A system in accordance with claim 48, wherein said communications specification provides for a data record, said packet data serving node further adapted for adding an internet access latency parameter to said data record and recording said internet access latency in said internet access latency parameter.

This listing of claims replaces all prior versions, and listings, of claims in the application.